

S.#	Topic	Sub Topics	Question	Answer Option (A)	Answer Option (B)	Answer Option (C)	Answer Option (D)
1	Introduction to Fundametel Concepts of Chemistry	concept of mole	A mole of a substance contains _____particles	6.2 x 1 22	6. 22 x 1 22	6. 22 x 1 23	6.2 x 1 22
2	Introduction to Fundametel Concepts of Chemistry	molecules	Which one of them is used as an automobile antifreeze	Ethanol	ethene	ethylene glycol	propene
3	atomic structure	BOHR'S model of an atom	Electrons can revolve only in those orbits having _____-angular momentum which depends on its _____number.	variable, quantum	fixed, principal	fixed, quantum	variable, principal
4	atomic structure	spectrum	an element or its compound is first _____to get its _____ spectrum by spectrometer	freezed,continuous	freezed,line	volatilized, line	volatilized, continuous
5	atomic structure	principal quantum number	How many electrons can occupy in 7th energy level of an atom. Calculate by using 2n ² formula	24	5	72	98
6	Gases	Dalton's law of partial pressure	When animals inhale air, oxygen will move into the lungs due to difference in partial pressure of oxygen in lungs and atmosphere. This obeys	Pascal's law	Dalton's law	Charles's law	Bohr's law
7	Gases	Diffusion of gases	The rate of diffusion of a gas having molar mass 32 as compared to H ₂ gas will be	6 times	4 times	one fourth	one eighth
8	Gases	london forces	London forces are present in	ammonia	water	kerosene oil	HCl
9	Liquids	properties of liquids	The densities of liquids are much _____than gases but _____to solids	smaller, closer	greater, closer	smaller, far away	greater, far away
10	Liquids	liquid crystals	a liquid crystalline state exist between two temperatures i-e melting temperature and _____temperature	boiling	freezing	clearing	all of these
11	Liquids	H-bonding	Which of the following shows H-bonding?	CH ₃ CH ₂ OH	CH ₃ -O-CH ₃	CH ₃ CH ₂ Cl	All of these
12	Solids	Amorphous solids	Amorphous solids turns into glass like state from rubber like state, this is called	transition	crack transition	glass transition	all of these
13	Solids	Properties of crystalline solids	The variation in physical properties of a crystal due to direction is called	isotropy	entropy	anisotropy	none of these
14	Solids	Ionic Solids	The nature of Binding Force in Ionic Crystals is	Magnetic	Repulsive	Electrostatic	Weak
15	Chemical Equilibrium	Reversible and irreversible reactions	A reaction with a tendency of occurring in forward and backward direction simultaneously is termed as	Irreversible	Unidirectional	Multidirectional	Reversible
16	Chemical Equilibrium	State of chemical equilibrium	Concentration of reactants and products are expressed as Moles per unit	Area	length	Volume	None of these
17	Chemical Equilibrium	Le Chatelier's Principle	The E.m.f of a Cell is equals to	Emf(oxidation) - Emf (Reduction)	Emf(oxidation) + Emf (Reduction)	Emf(oxidation) x Emf (Reduction)	None of these
18	Reaction Kinetics	Order of reaction and its determination	In general Photochemical reactions are of order	1	3	2	0
19	Reaction Kinetics	Rate Determining Steps	Rate determining step of a chemical reaction which occur in more than one step depends upon the	fastest step	Slowest Step	catalyst used	Temperature of reaction
20	Reaction Kinetics	Determination of the rate of a chemical reaction	Type of reactants or product decides the nature of method adapted for finding	Rate constant	Enthalpy	Temperature	Rate of a Reaction
21	Thermo chemistry and Energetic of Chemical Reactions	Energy in chemical reactions	Thermochemistry is very important to learn about	Chemical Equilibrium	Chemical Bonding	Heat contents of a compound	All of these
22	Thermo chemistry and Energetic of Chemical Reactions	System, Surrounding and State function	In Chemistry the work is generally	Done by Temperature change	Pressure - Temperature Work	Pressure Volume Work	None of these
23	Thermo chemistry and Energetic of Chemical Reactions	First Law of thermodynamics	Work done on the system is	Negative	depends upon Boundary Conditions	Positive	Zero
24	Electrochemistry	Introduction to Electrochemistry	Conversion of Electrical energy into chemical energy is	Mechanical Energy	Electromechanical Energy	Electrochemistry	Chemical Energy
25	Electrochemistry	Give the characteristics of a redox reaction.	Each half reaction in ion electron method is balanced by adding	Electrons on left hand side	Electron on ride hand side	Both left or right hand side	None of these
26	Electrochemistry	Give the characteristics of a redox reaction.	Only those substances are written in Ion Electron Method	which are oxidizing	which are reducing	which are not taking part in reaction	Which will take part in reaction
27	chemical bonding	cause of chemical bond	The outermost s and p orbitals of Noble gases are completely filled that why they are	stable, reactive	stable ,uncreative	unstable, reactive	unstable ,uncreative
28	chemical bonding	Energetics of bond formation	When repulsive forces are dominant over repulsive forces during bond formation, it leads to	stability	instability	accuracy	all of these
29	chemical bonding	atomic sizes	The atomic radius means the average distance b/w the _____ and its _____	proton, innermost shell	nucleus, system	nucleus, outermost shell	proton, system
30	S and p block elements	Electronic configuration	Group 1 elements are called?	alkaline earth metals	alkali metals	chalcogens	noble metals
31	S and p block elements	alkaline earth metals	The formula of Chile Saltpeter is	NaNO ₃	CaCO ₃	Ba (NO ₃) ₂	NH ₄ Cl
32	Transition Elements	General Characteristics	Why transition metals have strong metallic bonding?	Because of high melting point	Because d-electrons of outer shell take part in bonding	Because s-electrons of outer shell take part in bonding	Both s and d electrons takes part in bonding
33	Transition Elements	General properties	What is a complex/coordination compound?	A compound in which a metal atom or ion is covalently bonded with a group of neutral molecules or anions.	A compound that contains 2 or more than 2 different elements	A compound which has complex molecular geometry	A compound that contains a complex ion and can exist independently
34	Transition Elements	General Characteristics	Which orbitals take part in binding of transition elements	Outermost s orbital and p orbitals	Outermost d orbital and underlying half-filled f-orbitals	Outermost p orbital and underlying half-filled d-orbitals	Outermost s orbital and underlying half-filled d-orbitals
35	Fundamental principles of Organic Chemistry	Isomerism	Which class of compounds cannot show positional isomerism	alkane	alkene	alkyne	alcohol
36	Fundamental principles of Organic Chemistry	Classification of Organic Compounds	Formyl group is present in	Aldehydes	ethers	thiol	acetone
37	Fundamental Principles of Organic Chemistry	Classification of organic compound	Functional groups are _____ part of organic compounds	Physical	Polar	Chemical	Neutral
38	Chemistry of Hydrocarbons	Benzene	The bond angles in benzene ring are	9 o	6 o	12 o	18 o
39	Chemistry of Hydrocarbons	Alkynes	Polymerization of _____ produces synthetic rubber	Formaldehyde	Choloropropene	Chloroform	Vinyl bromide
40	Chemistry of Hydrocarbons	Nomenclature of alkanes, alkenes and alkynes	Which one of the following is correct structure of 2,2-Dimethylbutane?	CH ₃ (CH ₃) ₂ CCH ₂ CH ₃	CH ₃ (CH ₃)CCH ₂ CH ₃	CH ₃ (CH ₃)CCH ₂ CH ₂	CH ₃ CH ₂ CH ₂ CH ₃
41	Alkyl Halides	Classification and Nomenclature	In general formula of alkyl halide RX, X represents _____	Noble gases	Halogens	Metals	Metalloids
42	Alkyl Halides	Reactions	Which gases are produced when alcohol reacts with thionyl chloride	Sulphuric acid and carbon dioxide	Sulphur dioxide and hydrogen chloride	Sulphur chloride and hydrogen dioxide	Sulphuric acid and hydrogen chloride
43	Alkyl Halides	Reactions	Which of the following bond has highest bond energy value ?	C-I	C-H	C-Cl	C-F
44	Alcohol and Phenols	Alcohols	Which of the following is more soluble in water_____?	Ethanol	Phenol	Hexanol	Dimethyl ether
45	Alcohol and Phenols	Reactivity	The method which is used on industrial scale for production of alcohol from alkene ?	Hydrohalogenation of alkenes	Dehydration of alkenes	Hydration of alkenes	Hydroxylation of alkenes
46	Alcohol and Phenols	Physical properties of phenol	Phenol is _____liquid ?	Dense	Hard	Deliquescent	intermittent
47	Aldehydes and Ketones	Nomenclature	What is the Hybridization of carbon atom in Aldehyde group?	Sp ²	Sp ³	Sp	dsp ²
48	Aldehydes and Ketones	Reactions	Which of the following centers are present in the carbonyl compounds?	Electrophilic	Nucleophilic	Electron deficient	All of these
49	Aldehydes and Ketones	Reactions	Cyanohydrins when reacted with mineral acid produces _____?	Beta Hydroxy carboxylic acids	Alpha hydroxy carboxylic acids	Carboxylic acids	Unsaturated acids
50	Carboxylic Acids	Nomenclature	Acetic acid derived from the word 'Acetum' which means _____?	Acetic acid	Bitter	Citric	Vinegar
51	Carboxylic Acids	Physical properties of carboxylic acids	Solubility of carboxylic acids _____?	Decreases with increase of volume	Decreases with increase in molecular mass	Increases with increase in molecular mass	None of these
52	Carboxylic Acids	Reactivity	On reacting with which of the following carboxylic acids produce CO ₂ ?	Carbonate	Bicarbonate	Bisulphites	Both a and b
53	Macromolecules	Enzymes	Enzymes that catalyze hydrolysis:	Oxidoreductase	Hydrolases	Ligases	Transferases
54	Macromolecules	Proteins	Regular coiling & twisting of polypeptide chain caused by H-bonding in between NH & CO occurs in _____.	Primary structure	Secondary structure	Tertiary structure	Quaternary structure
55	Macromolecules	Proteins	Three dimensional folding of polypeptide chain results in formation of_____.	Primary structure	Secondary structure	Tertiary structure	Quaternary structure
56	Macromolecules	Proteins	Which of the following element is not usually present in all proteins?	Carbon	Hydrogen	Nitrogen	Sulphur